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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
08/978, 839	11/26/97	MARTIN	J ZMYJ-05-116

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ART UNIT	PAPER NUMBER
3743	6

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Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.
08/978,839

Applicant(s)

Martin et al.

Examiner

Ljiljana V. Cacic *LVC*Group Art Unit
3743 Responsive to communication(s) filed on Jun 21, 1999 This action is FINAL. Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire 3 month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

Disposition of Claims

 Claim(s) 1-11 is/are pending in the application.

Of the above, claim(s) none is/are withdrawn from consideration.

 Claim(s) _____ is/are allowed. Claim(s) 1-11 is/are rejected. Claim(s) _____ is/are objected to. Claims _____ are subject to restriction or election requirement.

Application Papers

 See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948. The drawing(s) filed on Nov 26, 1997 is/are objected to by the Examiner. The proposed drawing correction, filed on _____ is approved disapproved. The specification is objected to by the Examiner. The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

 Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

All Some* None of the CERTIFIED copies of the priority documents have been received.

received in Application No. (Series Code/Serial Number) _____.

received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received: _____

 Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

 Notice of References Cited, PTO-892 Information Disclosure Statement(s), PTO-1449, Paper No(s). _____ Interview Summary, PTO-413 Notice of Draftsperson's Patent Drawing Review, PTO-948 Notice of Informal Patent Application, PTO-152

--- SEE OFFICE ACTION ON THE FOLLOWING PAGES ---

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DETAILED ACTION

1. This Office action is in response to the amendment filed on June 21, 1999. Claims 1 through 11 remain in the application.

Drawings

2. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the combustion air added to the exhaust gas coming from the first furnace must be shown or the feature(s) canceled from the claim(s). This objection was cited in the previous Office action and, contrary to applicant's assertion, has not been rendered moot by the amendment filed on June 21, 1999. (Note that while combustion air 14 mixed with oxygen 16 being added to the second furnace 2 is shown, combustion air being added to the exhaust gas coming from the first furnace 1 via waste gas flue 12 is NOT shown.) No new matter should be entered. This objection can be rendered moot by changing the claim to cite combustion air as being added to the second furnace, for example.
3. Applicant is required to submit a proposed drawing correction in reply to this Office action. However, formal correction of the noted defect can be deferred until the application is allowed by the examiner.

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Specification

4. The abstract of the disclosure is objected to because it refers to the purported merits of the invention (i.e., sentence beginning with "This process achieves stable gasification at lower temperatures,). Also, the amended abstract does not avoid phrases which can be implied (i.e., "In a process.."). Correction is required. See MPEP § 608.01(b).

5. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: the term "exhaust gas" [as used in claims 6 through 9] does not have proper antecedent basis in the specification. Recommend changing the term "exhaust gas" to "combustible gas" or similar in claims 6 through 8 and to "waste gas" or similar in claim 9, as appropriate in view of the original disclosure.

6. 35 U.S.C. 112, first paragraph, requires the specification to be written in "full, clear, concise, and exact terms." The specification is replete with terms which are not clear, concise and exact. The specification should be revised carefully in order to comply with 35 U.S.C. 112, first paragraph. Examples of some unclear, inexact or verbose terms used in the specification are: "resulting combustible gas" [page 7, line 6], which gas appears to be alternately referred to as "exhaust gas" as cited in claims 6 through 9 without any statement of equivalence between these two terms--recommend replacing references to "exhaust gas" in the claims with "combustible gas" or similar as supported by specification; "waste gas flue" [page 7, line 7], which conducts the "resulting combustible gas" and not the "recirculated waste gas" [page 7, line 16]--recommend

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replacing “waste gas flue” with “gas flue”; the “waste gases” coming from heat exchanger 3 are, meanwhile, conducted to an “exhaust gas cleaning system” [page 8, line 2], not to a “waste gas cleaning system” --recommend replacing “exhaust gas cleaning system” with “waste gas cleaning system” or similar, as appropriate, for improved consistency and clarity.

Claim Rejections - 35 U.S.C. § 112

7. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
8. Claims 1 through 11 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

There is insufficient antecedent basis for the following limitations in the claims, for example: “the waste material residing in a charging area above the grate” [claim 1, lines 6-7]; “the gasified waste materials” [claim 3, line 3; claim 4, line 4]; “the range” [claim 3, line 3; claim 4, line 4]; “the generated gases” [claim 5, line 4]; “the exhaust gas” [claim 6, line 2; claim 7, line 2]; “the fact” [claim 10, line 1; claim 11, line 1].

With regard to claim 1, the term “thereof” in line 7 of the claim renders indefinite the claim and claims 2 through 11 depending therefrom because it is not clear to which previously cited element(s) this term refers.

With regard to claim 3, the limitation “an air ratio of 0.4 to 0.8” is not clear. The limitation should be changed to “an air ratio in a range of 0.4 to 0.8” or to “an air ratio having a

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value of 0.4 to 0.8" or similar, as appropriate. Claim 4 has the same limitation and is similarly unclear.

With regard to claim 7, it is not clear what is meant by the limitations beginning with "and the amount of the combustion air, added depends...". Recommend deleting the comma (,) immediately following "air" for improved clarity.

With regard to claim 9, it is not clear whether the limitation "the gas" in line 5 of the claim refers to the recirculated exhaust gas cited in line 2 of the claim, to the generated gases cited in claim 5 from which claim 9 depends, or to some other gas.

With regard to claim 10, the limitation "the air ratio...is 1.1 to 1.8" is not clear. The limitation should be changed to "the air ratio...is in a range of 1.1 to 1.8" or to "the air ratio..has a value of 1.1 to 1.8" or similar, as appropriate.

With regard to claim 11, the limitation "the combustion temperature...is 950 to 1250°C" is unclear and should be changed to "the combustion temperature..is in a range of 950°C to 1250°C" or "the combustion temperature...has a value between 950°C and 1250°C" or similar, as appropriate.

The above is an indicative, but not necessarily an exhaustive, list of 35 U.S.C. 112, second paragraph, problems. Applicant is therefore advised to carefully review all of the claims for additional problems. Correction is required of all of the 35 U.S.C. 112, second paragraph problems, whether or not these were particularly pointed out above.

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Allowable Subject Matter

9. Claims 1 through 11 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action.

Response to Arguments

10. Applicant's arguments filed on June 21, 1999 have been fully considered but they are not persuasive with regard to applicant's assertion that the objections to the drawings and to the written description requirement as cited in the previous Office action have been rendered moot by the amendment.

With regard to applicant's argument that the objection to the drawings cited in the previous Office action are rendered moot by the amendment filed on June 21, 1999, it is hereby noted that, while the drawings DO show combustion air 14 mixed with oxygen 16 being added to the second furnace 2, they do NOT show combustion air being added to the combustible gas coming from the first furnace 1 via waste gas flue 12. This objection can be rendered moot by changing the claim to cite combustion air as being added to the second furnace, for example.

With regard to applicant's argument that the specification sufficiently teaches those skilled in the art the manner in which combustion air via line 14 mixes in the second furnace with exhaust gas from the first furnace, it is hereby pointed out that, contrary to applicant's arguments, while the original disclosure does describe the addition of combustion air to the second furnace 2 [page 7, lines 10-11], neither the drawings nor the specification disclose the addition of combustion air to the *exhaust* gas coming from the first furnace 1. The specification does not

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even mention *exhaust* gas coming from the first furnace per se; instead, it refers to a *combustible* gas resulting from gasification as being transferred to the second furnace. According to art-recognized terminology, combustible gases are produced as a result of gasification, while combustion generally produces exhaust gases comprising flyash, carbon oxides and water vapor, with the flyash in turn comprising some combustible matter in the form of unburnt material; exhaust gas is generally not considered to be a combustible gas. The drawings, on the other hand, show *no* external supply lines to the exhaust/waste gas flue 12 carrying combustible gas from the first furnace 1 to the second furnace 2. The drawings do show combustion air being added to the ambient environment of the second furnace 2, with the ambient environment in the second furnace comprising a mixture of various gaseous and gas-borne materials (and no longer just gases coming from the first furnace 1) which undergo afterburning in the second furnace 2. The claimed invention must be described in such a way as would indicate possession of the invention as of the original filing date. *In re Wilder*, 736 F.2d 1516, 222 USPQ 369 (Fed. Cir. 1984).

Conclusion

11. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after

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the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ljiljana (Lil) V. Cirim, whose telephone number is (703) 308-3925.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ira Lazarus, can be reached on (703) 308-1935. The fax phone number is (703) 305-3463.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-0861.

lvc *LVC*
August 13, 1999



Ira S. Lazarus
Supervisory Patent Examiner
Group 3700